January 31, 2003 CERTIFIED MAIL #9059 2740

Vince Vela
Arrow Uniform Rental
4545 Calumet Avenue
Hammond, Indiana 46327

Re: Registered Operation Status for Laundering Process, 089-16793-00253

Dear Mr. Vela:

The application from Arrow Uniform Rental received on November 21, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following Laundering Process to be located at 4545 Calumet Avenue, Hammond Indiana, is classified as registered:

(a) Ludell Direct-Contact, Water Heater, with a maximum capacity of 6.0 MMBtu/hr heat input, burning natural gas only, with uncontrolled emissions.

(b) Washing and Drying Process number 1, which includes one 700-lb Washex Washer, three 480-lb Washex Washers, two 200-lb Challenge Flo-90 Dryers, and one 100-lb Cissel Dryer. These dryers have a combined maximum capacity of 5.0 MMBtu/hr heat input, burning natural gas only. Particulate emissions are controlled by an E.C.I. Lint Collector.

(c) Washing and Drying Process number 2, which includes two 700-lb Washex Washers, one 125-lb Washex Washer, one 125-lb Milnor Washer, one 50-lb Washex Washer, two 400-lb Challenge Flo-90 Dryers, and one 100-lb Cissel Dryer. These dryers have a combined maximum capacity of 5.0 MMBtu/hr heat input, burning natural gas only. Particulate emissions are controlled by an E.C.I. Lint Collector.

(d) Parker Package Boiler, has a maximum capacity of 4.83 MMBtu/hr heat input, burning natural gas only, and having uncontrolled emissions.

The following conditions shall be applicable:

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:

(a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

Pursuant to 326 IAC 6-2-4 (particulate Emissions Limitations), the particulate emissions from all of the indirect heating facilities shall be limited by the following equation since all of the facilities were constructed after September 21, 1983:

$Pt = 1.09/Q^{0.26}$

where Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input
Q = Total source maximum operating capacity rating in mmBtu/hr heat input

The total heat input is 4.83 mmBtu/hr which gives an allowable of 0.724 lbs/mmBtu, per 6-2-4, Pt for sources <10mmBtu/hr cannot exceed 0.600 lbs/mmBtu, which is equivalent to 2.90 lbs hr. Pursuant to Hammond air Quality Control Ordinance 3522 (as amended), the Company's allowable emissions are limited to the potential emissions after controls for natural gas burning, 0.202 lbs/hr. This limitation requires the Company to only burn natural gas, to meet the allowable rate.

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the laundering process shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The limitation based on this rule is 14.14 tons per year, which is greater than the potentials before controls. Since this limit can be met without the pollution control device in operation, the process will be limited to the potentials after controls per Hammond Air Quality Control Ordinance 3522 (as amended). The lint collectors shall be in operation at all times the washing process is in operation, in order to comply with this limit.

Pursuant to Hammond Air Quality Control Ordinance 3522 (as amended), the source will be required to annually submit a statement of the actual emissions of all federally regulated pollutants from the source, for the purpose of source classification.

This registration is a new registration issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section Office of Air Quality 100 North Senate Avenue Indianapolis, IN 46206-6015	and	Hammond Department of Environmental Management Air Pollution Control Division 5925 Calumet Avenue Hammond, Indiana 46320

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Ronald Novak, Director
Hammond Department of Environmental Management

KM

cc: Permit Administrator – Mindy Hahn

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

Company Name:	Arrow Uniform Rental
Address:	4545 Calumet Avenue
City:	Hammond
Authorized Individual:	Vince Vela
Phone #:	(219) 931-2404
Registration #:	089-16793-00253

I hereby certify that Arrow Uniform Rental is still in operation and is in compliance with the requirements of Registration 089-16793-00253.

Name (typed): Vince Vela
Title: Plant Manager
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality
and
Hammond Department of Environmental Management
Air Pollution Control Division

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	Arrow Uniform Rental
Source Location:	4545 Calumet Avenue, Hammond, Indiana, 46327
County:	Lake
SIC Code:	7211 – Power Laundries
Operation Permit No.:	089-16793-00253
Permit Reviewer:	Kristina Massey

The Hammond Department of Environmental Management (HDEM) has reviewed an application from Arrow Uniform Rental relating to the operation of the Laundering Operation. This is the first State Registration issued to the source. The Company has been and will continue to operate under Local Operation Permits.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Ludell Direct-Contact, Water Heater, with a maximum capacity of 6.0 MMBtu/hr heat input, burning natural gas only, with uncontrolled emissions.

(b) Washing and Drying Process number 1, which includes one 700-lb Washex Washers, three 480-lb Washex Washers, two 200-lb Challenge Flo-90 Dryers, and one 100-lb Cissel Dryer. These dryers have a combined maximum capacity of 5.0 MMBtu/hr heat input, burning natural gas only. Particulate emissions are controlled by an E.C.I. Lint Collector.

(c) Washing and Drying Process number 2, which includes two 700-lb Washex Washer, one 125-lb Washex Washer, one 125-lb Milnor Washer, one 50-lb Washex Washer, two 400-lb Challenge Flo-90 Dryers, and one 100-lb Cissel Dryer. These dryers have a combined maximum capacity of 5.0 MMBtu/hr heat input, burning natural gas only. Particulate emissions are controlled by an E.C.I. Lint Collector.

(d) Parker Package Boiler, has a maximum capacity of 4.83 MMBtu/hr heat input, burning natural gas only, and having uncontrolled emissions.

This source does not meet the criteria for a dry cleaner, 40 CFR, Part 63, Subpart M - National Emission Standards for Dry Cleaning Facilities.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process, and no new permitted emissions units.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) OP 01979, issued on January 29, 2002; and

(b) OP 01980, issued on January 29, 2002; and

(c) OP 01981, issued on January 29, 2002; and

(d) OP 01982, issued on January 29, 2002.

All conditions from previous approvals were incorporated into this permit.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
1	Boiler	28	1.83	1310	150
2	Water Heater	28	1	1418	90
3	3 Dryers	28	3.5	14000	90
4	2 Dryers	28	3.5	10000	90

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Director that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on November 21, 2002, with follow-up information received on December 10, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (five (5) pages).

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	10.29
PM-10	10.29
SO_2	0.05
VOC	0.44
CO	6.79
NO_x	8.09

The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants is less than 100 tons per year and less than 25 tons per year of VOC in Lake County. Therefore, the source is not subject to the provisions of 326 IAC 2-7. The Particulate Matter (PM) and Particulate Matter less than 10 microns (PM-10) have a potential to emit greater than five (5) tons per year and less than twenty-five (25) tons per year, therefore, it is subject to 326 IAC 2-5 – Registration.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2001 HDEM emission data.

Pollutant	Actual Emissions (tons/year)
PM	0.27
PM-10	0.27
SO_2	0.01
VOC	0.13
CO	0.42
NO_x	2.10
HAP (specify)	0

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM-10	Moderate nonattainment
SO_2	Primary nonattainment
NO_2	Attainment/unclassifiable
Ozone	Severe nonattainment
CO	Attainment/unclassifiable
Lead	Attainment/unclassifiable

(a) Lake County has been classified as attainment or unclassifiable for NO_2, CO and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as nonattainment for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(c) Lake County has been classified as nonattainment for PM-10. Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.81
PM10	0.81
SO_2	0.05
VOC	0.44
CO	6.79
NO_x	8.09

This existing source is **not** a major stationary source because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year, and it is not in one of the 28 listed source categories.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the HDEM.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source, Subpart Dc does not apply because the boiler is rated at less than 10 MMBtu/hr.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Lake County and the potential to emit VOC and NO_X is less than ten (10) tons per year. The source is not one of the twenty-eight (28) listed sources and its potential to emit PM10 is less than one-hundred (100) tons per year including fugitive emissions, therefore, 326 IAC 2-6 does not apply.

Pursuant to Hammond Air Quality Control Ordinance 3522 (as amended), the source will be required to annually submit a statement of the actual emissions of all federally regulated pollutants from the source, for the purpose of source classification.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of twenty percent (20%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-1-2 (Particulate Emissions Limitations)

These facilities are not subject to 326 IAC 6-1-2 (Particulate Emissions Limitations), because the source does not have the potential to emit 100 tons/year or actual emissions of 10 tons/year of particulate matter.

326 IAC 6-2-4 (Particulate Emissions Limitations)

The particulate emissions from all of the indirect heating facilities shall be limited by the following equation since all of the facilities were constructed after September 21, 1983:

$Pt = 1.09/Q^{0.26}$

where Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input
Q = Total source maximum operating capacity rating in mmBtu/hr heat input

The total heat input is 4.83 mmBtu/hr which gives an allowable of 0.724 lbs/mmBtu, per 6-2-4, Pt for sources <10mmBtu/hr cannot exceed 0.600 lbs/mmBtu, which is equivalent to 2.90 lbs hr. Pursuant to Hammond air Quality Control Ordinance 3522 (as amended), the Company's allowable emissions are limited to the potential emissions after controls for natural gas burning, 0.202 lbs/hr. This limitation requires the Company to only burn natural gas, to meet the allowable rate.

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the laundering process shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The limitation based on this rule is 14.14 tons per year, which is greater than the potentials before controls. Since this limit can be met without the pollution control device in operation, the process will be limited to the potentials after controls per Hammond Air Quality Control Ordinance 3522 (as amended). The lint collectors shall be in operation at all times the washing process is in operation, in order to comply with this limit.

Conclusion

The operation of this Washing Process shall be subject to the conditions of the attached proposed Registration 089-16793-00253 and Local Operation Permit.

ALABAMA POWER LAW (CDS)/EIS CALCULATIONS

Arrow Uniform Rental, Inc.
4545 Calumet Avenue
Hammond, Indiana 46327

PLANT ID NO: 253
INSP DATE: 11/16/01
CALC DATE: 12/10/02

CALCULATIONS BY: Kristina Massey

YEAR OF DATA: 2001

NO. OF POINTS: 4
NO. OF SEGMENTS: 6

NOTES
EF: EMISSION FACTOR
CE: CONTROL EFFICIENCY
MDR: MAXIMUM DESIGN RATE
MDC: MAXIMUM DESIGN CAPACITY
Ts: STACK DISCHARGE TEMPERATURE
UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

Parker Package Boiler
(Natural Gas Combustion)
CNTRL DEV: NONE

MDC (mmBtu/hr): 4.83
MDR (mmcft/hr): 0.0046
HEAT CONTENT (Btu/cft): 1,050
QTY BURNED (mmcft/yr): 10.00
STACK ID (DIAM:HEIGHT): 1.83': 28'
FLOWRATE (ACFM): 1,310
Ts(°F): 150

PERMITTED OPERATING HRS: **8760** hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
SCC NO. 1-02-006-03			BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.0350	0.8390	**0.1531**	0.0350	0.1531	0.0036	0.035	0.153	0.0380	0.0380
PM10	7.6	0	0.0350	0.8390	**0.1531**	0.0350	0.1531	0.0036	0.035	0.153	0.0380	0.0380
SOx	0.6	0	0.0028	0.0662	**0.0121**	0.0028	0.0121	N/A	0.003	0.012	0.0030	0.0030
NOx	100	0	0.4600	11.0400	**2.0148**	0.4600	2.0148	N/A	0.460	2.015	0.5000	0.5000
VOC	5.5	0	0.0253	0.6072	**0.1108**	0.0253	0.1108	N/A	0.025	0.111	0.0275	0.0275
CO	84	0	0.3864	9.2736	**1.6924**	0.3864	1.6924	N/A	0.386	1.692	0.4200	0.4200
LEAD	0.0005	0	0.0000	0.0001	**0.0000**	0.0000	0.0000	N/A	N/A	#VALUE!	0.0000	0.0000

* This point is class "State Exempt" according to potential emissions.

Hammond AQC Ordinance No. 3522 (as amended)

****

Ludell-Direct Contact Water Heat MDC (mmBtu/hr): 6 HEAT CONTENT (Btu/cft): 1,050 STACK ID (DIAM:HEIGHT): 1': 28'

(Natural Gas Combustion) MDR (mmcft/hr): 0.0057 QTY BURNED (mmcft/yr): 12.00 FLOWRATE (ACFM): 1,418

CNTRL DEV: NONE Ts(°F): 90

PERMITTED OPERATING HRS: **8760** hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
SCC NO. 1-02-006-03			BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.0434	1.0423	**0.1902**	0.0434	0.1902	0.0037	0.043	0.190	0.0456	0.0456
PM10	7.6	0	0.0434	1.0423	**0.1902**	0.0434	0.1902	0.0037	0.043	0.190	0.0456	0.0456
SOx	0.6	0	0.0034	0.0823	**0.0150**	0.0034	0.0150	N/A	0.003	0.015	0.0036	0.0036
NOx	100	0	0.5714	13.7143	**2.5029**	0.5714	2.5029	N/A	0.571	2.503	0.6000	0.6000
VOC	5.5	0	0.0314	0.7543	**0.1377**	0.0314	0.1377	N/A	0.031	0.138	0.0330	0.0330
CO	84	0	0.4800	11.5200	**2.1024**	0.4800	2.1024	N/A	0.480	2.102	0.5040	0.5040
LEAD	0.0005	0	0.0000	0.0001	**0.0000**	0.0000	0.0000	N/A	N/A	#VALUE!	0.0000	0.0000

* This point is class "State Exempt" according to potential emissions. Hammond AQC Ordinance No. 3522 (as amended)

****

Washing and Drying Process No. 1 MDR (T/hr): 0.25 STACK ID (DIAM:HEIGHT): 3.5': 28'

(2) 200 lbs Challenge Flo-90 Dryers YEARLY PROD (T/yr): 1,257.80 FLOWRATE (ACFM): 14000

& (1) 100 lbs Cissel Dryer Ts(°F): 90

PERMITTED OPERATING HRS: **8760** hr/yr

CNTRL DEV: E.C.I. Lint Collector			POTENTIAL EMISSIONS						COMPANY ACTUAL	
(See Below)			BEFORE CONTROLS			AFTER CONTROLS			BEFORE	AFTER
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	CONTROLS	CONTROLS
PM	3.156	0.98	0.7890	18.9360	**3.4558**	0.0158	0.0691	0.0001	1.9848	0.0397
PM10	3.156	0.98	0.7890	18.9360	**3.4558**	0.0158	0.0691	0.0001	1.9848	0.0397
SOx	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000
NOx	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000
VOC	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000
CO	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000
LEAD	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000

(See Review of 4/6/89)

Lint Generated - (2) Challenge Flo-90 Dryers: 8 lbs lint / day each

Cissel Dryer: 2 lbs lint/day

Dust Loading - (18 lbs lint/day) / (24 hr/day) = 0.75 lbs/hr captured

(0.75 lbs/hr) / (0.95) = 0.789 lbs/hr potential dust loading

E.F. = (dust loading lbs/hr) / (MDR tons/hr) = (0.789) / (0.25) = 3.156 lbs/ton

The throughput was modified on 12/10/02 due to erroneously high values. The original throughputs were based on everything washed, not the amount dried.

Washing and Drying Process No.
(Natural Gas Combustion)
CNTRL DEV: NONE

MDC (mmBtu/hr): 5
MDR (mmcft/hr): 0.0048

HEAT CONTENT (Btu/cft): 1,050
QTY BURNED (mmcft/yr): 10.00

STACK ID (DIAM:HEIGHT): 3.5': 28'
FLOWRATE (ACFM): 14000
Ts(°F): 90

PERMITTED OPERATING HRS: **8760** hr/yr

SCC NO. 1-02-006-03			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.0362	0.8686	**0.1585**	0.0362	0.1585	0.0003	3.4690909	15.1946	0.0380	0.0380
PM10	7.6	0	0.0362	0.8686	**0.1585**	0.0362	0.1585	0.0003	3.4690909	15.1946	0.0380	0.0380
SOx	0.6	0	0.0029	0.0686	**0.0125**	0.0029	0.0125	N/A	0	0.0000	0.0030	0.0030
NOx	100	0	0.4762	11.4286	**2.0857**	0.4762	2.0857	N/A	0	0.0000	0.5000	0.5000
VOC	5.5	0	0.0262	0.6286	**0.1147**	0.0262	0.1147	N/A	0	0.0000	0.0275	0.0275
CO	84	0	0.4000	9.6000	**1.7520**	0.4000	1.7520	N/A	0	0.0000	0.4200	0.4200
LEAD	0.005	0	0.0000	0.0006	**0.0001**	0.0000	0.0001	N/A	0	0.0000	0.0000	0.0000

(2) 200 lbs Challenge Flo-90 Dryers - 2.0 MMBtu/hr each
(1) 100 lbs Cissel Dryer - 1.0 MMBtu/hr

Total: Washing and Drying Process No. 1

	POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	0.8252	19.8046	3.6143	0.0520	0.2276	0.0004	0.052	0.228	2.0228	0.0777
PM10	0.8252	19.8046	3.6143	0.0520	0.2276	0.0004	0.052	0.228	2.0228	0.0777
SOx	0.0029	0.0686	0.0125	0.0029	0.0125	#VALUE!	0.003	0.000	0.0030	0.0030
NOx	0.4762	11.4286	2.0857	0.4762	2.0857	#VALUE!	0.476	0.000	0.5000	0.5000
VOC	0.0262	0.6286	0.1147	0.0262	0.1147	#VALUE!	0.026	0.000	0.0275	0.0275
CO	0.4000	9.6000	1.7520	0.4000	1.7520	#VALUE!	0.400	0.000	0.4200	0.4200
LEAD	0.0000	0.0006	0.0001	0.0000	0.0001	#VALUE!	N/A	#VALUE!	0.0000	0.0000

* This point is class "State Exempt" according to potential emissions.

Hammond AQC Ordinance No. 3522 (as amended)

Washing and Drying Process No. 2
(2) 400 lbs Challenge Flo-90 Dryers
& (1) 100 lbs Cissel Dryer

MDR (T/hr): 0.45
YEARLY PROD (T/yr): 2,236.10

STACK ID (DIAM:HEIGHT): 3.5': 28'
FLOWRATE (ACFM): 10000
Ts(°F): 90

PERMITTED OPERATING HRS: **8760** hr/yr

CNTRL DEV: SMC Lint Collector
(See Below)

			POTENTIAL EMISSIONS						COMPANY ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS			BEFORE	AFTER
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	CONTROLS	CONTROLS
PM	3.156	0.9799	1.4202	34.0848	**6.2205**	0.0285	0.1250	0.0003	3.5286	0.0709
PM10	3.156	0.9799	1.4202	34.0848	**6.2205**	0.0285	0.1250	0.0003	3.5286	0.0709
SOx	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000
NOx	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000
VOC	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000
CO	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000
LEAD	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000

(See Review of 4/6/89)
Lint Generated - (2) Challenge Flo-90 Dryers: 8 lbs lint / day each
Cissel Dryer: 2 lbs lint/day
Dust Loading - (18 lbs lint/day) / (24 hr/day) = 0.75 lbs/hr captured
(0.75 lbs/hr) / (0.95) = 0.789 lbs/hr potential dust loading
E.F. = (dust loading lbs/hr) / (MDR tons/hr) = (0.789) / (0.25) = 3.156 lbs/ton
The throughput was modified on 12/10/02 due to erroneously high values. The original throughputs were based on everything washed, not the amount dried.

Washing and Drying Process No. :
(Natural Gas Combustion)
CNTRL DEV: NONE

MDC (mmBtu/hr): 6
MDR (mmcft/hr): 0.0057

HEAT CONTENT (Btu/cft): 1,050
QTY BURNED (mmcft/yr): 10.00

STACK ID (DIAM:HEIGHT): 3.5': 28'
FLOWRATE (ACFM): 10000
Ts(°F): 90

PERMITTED OPERATING HRS: **5200** hr/yr

SCC NO. 1-02-006-03

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.0434	1.0423	**0.1129**	0.0434	0.1129	0.0005	0.0434	0.1129	0.0380	0.0380
PM10	7.6	0	0.0434	1.0423	**0.1129**	0.0434	0.1129	0.0005	0.0434	0.1129	0.0380	0.0380
SOx	0.6	0	0.0034	0.0823	**0.0089**	0.0034	0.0089	N/A	0	0.0000	0.0030	0.0030
NOx	100	0	0.5714	13.7143	**1.4857**	0.5714	1.4857	N/A	0	0.0000	0.5000	0.5000
VOC	5.5	0	0.0314	0.7543	**0.0817**	0.0314	0.0817	N/A	0	0.0000	0.0275	0.0275
CO	84	0	0.4800	11.5200	**1.2480**	0.4800	1.2480	N/A	0	0.0000	0.4200	0.4200
LEAD	0.0005	0	0.0000	0.0001	**0.0000**	0.0000	0.0000	N/A	0	0.0000	0.0000	0.0000

(2) 400 lbs Challenge Flo-90 Dryers - 2.5 MMBtu/hr each
(1) 100 lbs Cissel Dryer - 1.0 MMBtu/hr

Total: Washing and Drying Process No. 2

	POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	1.4636	35.1271	6.3334	0.0720	0.2379	0.0009	0.072	0.238	3.5666	0.1089
PM10	1.4636	35.1271	6.3334	0.0720	0.2379	0.0009	0.072	0.238	3.5666	0.1089
SOx	0.0034	0.0823	0.0089	0.0034	0.0089	#VALUE!	0.003	0.000	0.0030	0.0030
NOx	0.5714	13.7143	1.4857	0.5714	1.4857	#VALUE!	0.571	0.000	0.5000	0.5000
VOC	0.0314	0.7543	0.0817	0.0314	0.0817	#VALUE!	0.031	0.000	0.0275	0.0275
CO	0.4800	11.5200	1.2480	0.4800	1.2480	#VALUE!	0.480	0.000	0.4200	0.4200
LEAD	0.0000	0.0001	0.0000	0.0000	0.0000	#VALUE!	N/A	#VALUE!	0.0000	0.0000

* This point is class "State Exempt" according to potential PM emissions.

Hammond AQC Ordinance No. 3522 (as amended)

Plant Totals

	POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	2.3672	56.8130	10.2911	0.2023	0.8089	0.0086	0.2023	0.8089	5.6730	0.2702
PM10	2.3672	56.8130	10.2911	0.2023	0.8089	0.0086	0.2023	0.8089	5.6730	0.2702
SOx	0.0125	0.2994	0.0485	0.0125	0.0485	#VALUE!	0.0125	0.0271	0.0126	0.0126
NOx	2.0790	49.8971	8.0891	2.0790	8.0891	#VALUE!	2.0790	4.5177	2.1000	2.1000
VOC	0.1143	2.7443	0.4449	0.1143	0.4449	#VALUE!	0.1143	0.2485	0.1155	0.1155
CO	1.7464	41.9136	6.7948	1.7464	6.7948	#VALUE!	1.7464	3.7948	1.7640	1.7640
LEAD	0.0000	0.0008	0.0001	0.0000	0.0001	#VALUE!	#VALUE!	#VALUE!	0.0000	0.0000

* This source is class "State Registered" according to potential NOx emissions.